



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/038,640	01/04/2002	Jonathan S. Stinson	23,369-110	9194
23452	7590	11/14/2005	EXAMINER	
PATENT DEPARTMENT LARKIN, HOFFMAN, DALY & LINDGREN, LTD. 1500 WELLS FARGO PLAZA 7900 XERXES AVENUE SOUTH BLOOMINGTON, MN 55431			EREZO, DARWIN P	
			ART UNIT	PAPER NUMBER
			3731	

DATE MAILED: 11/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/038,640

Applicant(s)

STINSON, JONATHAN S.

Examiner

Darwin P. Erez

Art Unit

3731

**The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 September 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3, 5-8, 14, 15, 17, 25 and 52-93 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 76-93 is/are allowed.
- 6) ☒ Claim(s) 1-3, 5, 7, 14, 15, 17, 25, 52, 53, 56, 57 and 59-75 is/are rejected.
- 7) ☒ Claim(s) 6, 8, 54, 55 and 58 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 09/02/2005 has been entered.

Claim Rejections - 35 USC § 102

2. Claims 1-3, 5, 7, 14, 15, 17, 25, 52, 53, 56, 57, 59-65, 68-75 are rejected under 35 U.S.C. 102(b) as being anticipated by US 5,064,435 to Porter.

As to claims 1, 25, 56, Porter discloses a body insertable prosthesis or stent, including a body insertable structure including at least one flexible strand selectively formed to provide a plurality of discrete first tubular segments (the overlapped portions in Fig. 6) and a plurality of discrete second tubular segments (the non-overlapped portions in Fig. 6) in an alternating sequence; wherein the first tubular segments and the second tubular segments have respective first and second nominal diameters when the tubular is in a relaxed state and wherein the tubular is radially compressible against an elastic restoring force to a predetermined diameter due to the stent being a self expandable stent. It would also be inherent for the first tubular or overlapped portion to have a first axial stiffness and first radial force levels higher than a second axial stiffness and second radial force of the second tubular segments or non-overlapped portion

because the stiffness in the overlapped portion includes the stiffness of both layers compared to a single layer in the non-overlapped portion. This is similar Applicant's invention shown in Fig. 7 with overlapping portions and would thus function in the same manner.

As to claims 2 and 52, Porter's first axial stiffness levels would inherently be the same since they are constructed the same way, i.e., each having a reinforcing strand.

As to claims 3 and 53, Porter's second axial stiffness levels would inherently be the same since they are constructed the same way.

As to claims 5, 7, 57, 59, 62, Porter teaches a plurality of flexible strands forming multiple crossing angles, wherein both strands have the same crossing angle (Fig. 6)

As to claim 14, the tubular structure consists essentially of alternating sequence of first and second tubular segments (Fig. 6).

As to claims 15 and 75, each of the segment has at least a length of 1 cm (actually 100mm, col. 6, line 45).

As to claims 17 and 61, the nominal diameters are substantially the same (Fig. 6).

As to claim 60, the nominal diameters are not the same (Fig. 9).

As to claim 63, the second number of filaments in the second tubular segment is less than the first number in the first tubular segment.

As to claim 64, the filaments in the first portion includes overlapping filaments, therefore they are different filaments.

As to claim 65, Porter teaches the use of metallic filaments (col. 5, lines 10-11).

As to claims 68 and 69, the first tubular segment has a strand that spans the length of the structure and a reinforcing filament that only spans the first tubular segment.

As to claims 70-74, the first tubular segment of Porter would inherently have a higher radial force since it is reinforced, wherein the levels are all the same for each segment, wherein the nominal diameters are substantially the same, wherein the tubular wall includes alternating first segment and a second segment.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 66 and 67 are rejected under 35 U.S.C. 103(a) as being unpatentable over Porter in US 6,045,568 to Igaki et al.

Porter discloses a stent formed of a metallic filament (as described above) but is silent with regards to the stent formed of a bioabsorbable material. Igaki teaches forming a stent out of a bioabsorbable material so that the stent will absorb into the body in several months, a prospect which is "favorable for the living body" (col. 5, lines 65-67). Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to form the stent of Porter out of bioabsorbable material so that it will dissolve within a few months of implantation, maintaining patency in a previously

Art Unit: 3731

occluded blood vessel, a result which is favorable to the recovery of the patient, as taught by Igaki et al.

Allowable Subject Matter

5. Claims 6, 8, 54, 55, 58 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

6. Claims 76-93 are allowed.

7. The following is a statement of reasons for the indication of allowable subject matter: The prior art of record fails to teach a stent having a first tubular segment and a second tubular segment, wherein the first tubular segment has a first axial stiffness higher than a second axial stiffness of the second tubular segment, and wherein the first tubular segment has a first radial force level lower than a second radial force level of the second tubular segment. The prior art also fails to teach the stent having two opposed helical strands forming multiple strand crossings defining strand crossing angles including a first strand crossing angle along the first tubular segments and a second strand crossing angle along the second tubular segments, and wherein the second strand crossing angle is larger than the first strand crossing angle. This structure arrangement provides the first tubular element with a higher axial stiffness but a lower radial force level than a the second tubular element.

Response to Arguments

8. Applicant's arguments with respect to claims 1-3, 5, 7, 14, 17, 25, 52, 53, 56, 57, 59-75 have been considered but are moot in view of the new ground(s) of rejection.


9. Applicant argues that Porter fails to teach a discrete tubular segment. However, it is the Examiner's position that each overlapped or reinforce tubular segment is a discrete tubular segment. A discrete tubular segment does not preclude an overlapped portion, especially since the Applicant also teaches a stent having a first tubular segment including an overlapping portion.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Darwin P. Erez who's telephone number is (571) 272-4695. The examiner can normally be reached on M-F (7:30-4:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anhtuan T. Nguyen can be reached on (571) 272-4963. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


GLENN K. DAWSON
PRIMARY EXAMINER

de